NASA Glenn Success Stories

Fluoropolymer Filled Silicon Dioxide and Diamond-like Carbon Coatings used on Speed Skates

U.S. Speedskating

TECHNOLOGY

NASA engineers teamed up with the U. S. Speedskating to improve speed skates for competition. Coatings were applied to the blades of the skates to help to lower friction and offer wear resistance.

Thin Coatings have the potential to help U.S. athletes race to victory

COMMERCIAL APPLICATION

- **Medical**
  - Oxygen and moisture diffusion barriers for medical products
  - Corrosive barrier films for scalpels and razor blades
- **Industrial**
  - Corrosive barriers for tools and razor blades
  - Lowering the abrasive wear of magnetic heads for video, audio equipment, and computer hard drives
  - Low friction coating water- shedding coating for automotive front windows
  - Flexible oxygen barrier films for food packaging
- **Recreational**
  - Reduces friction on speed skate blades and other sporting equipment
  - Scratch resistant, UV absorbing and water shedding sunglasses

NASA APPLICATIONS

- Wear resistant surfaces
- Moisture barrier films
- Low friction surfaces
- Corrosion barriers

SOCIAL / ECONOMIC BENEFIT

- Diamond-like Carbon Coatings increase the useful life of surfaces they are applied to
- NASA has performed testing on skate blades for the U.S. Speed Skating team to compete at its best

NASA Contact: Bruce Banks
Company Contact: Mike Crowe